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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|-------------------------|----------------------------------|------------------------|
| 10/600,701 | 06/23/2003 | Richard Newton Hill JR. | | 5740 |
| 7590 RICHARD NEWTON HILL, JR. 1960 EMMITSBURG RD. GETTYSBURG, PA 17325 | | | EXAMINER FREAY, CHARLES GRANT | |
| | | | ART UNIT 3746 | PAPER NUMBER |
| | | | MAIL DATE 07/11/2007 | DELIVERY MODE PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|------------------------|----------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/600,701 | HILL, RICHARD NEWTON | |
| | Examiner | Art Unit | |
| | Charles G. Freay | 3746 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 24 May 2007.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 45-58 is/are pending in the application.
- 4a) Of the above claim(s) 47, 53-56 and 58 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 45, 46, 48-52 and 57 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is in response to the Request for Continued Examination of May 3, 2007 and the Amendment of May 24, 2007. In making the below rejections and/or objections the examiner has considered and addressed each of the applicant's arguments.

Election/Restrictions

The applicant is reminded that prosecution in this case is limited to the elected species as set forth in the election of April 14, 2006. Specifically, from species set 1 the species of Fig. 4 was elected, from species set 2 the species of Fig. 7 was elected and from species set 3 the species relating to delivering the water to a reservoir for the intended purpose of sea farming was elected.

In accordance with the above election, made without traverse, the following claims are set forth as being withdrawn from consideration since they are directed to non-elected species: claims 47, 53-56 and 58.

Claim Objections

Claim 51 is objected to because of the following informalities: in line 2 after "wear ring" "are" should be inserted and in lines 3-5 all of the material in the phrase "and being attached....at a second end" is redundant since it is included in the independent claim and should be deleted. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 45, 48-51 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nielsen (USPN 5,435,134) in view of Anderson (USPN 4,442,887).

Nielsen discloses a wave and tide actuated submersible pump (Fig. 1) for use in an open body of water (col. 3 line 13) having a cylinder (3) with an open top end and a closed bottom end (2) which can be secured to the sea bottom. An inlet check valve (22), an outlet check valve (31) and a weighted piston (4). There is a buoy (6) connected to the piston by a flexible connector (5). The piston moves on the upstroke of the cycle by the wave lifting the piston and moves downwardly under its own weight (col. 5 lines 40-46). There is a mechanism (41) for restricting the upward stroke of the piston within the pump cylinder. Nielsen does not disclose a lifting eye or a mooring ring on the buoy, a mooring guide and wear ring mounted to the top of the cylinder or the water being delivered to a reservoir. Anderson discloses a wave actuated piston pump having a buoy (68) with a lifting eye, a mooring ring, and a mooring ring guide and wear ring (52, 54) mounted at the top of a cylinder. The pump delivers to a reservoir (10, 20). At the time of the invention it would have been obvious to one of ordinary skill in the art to use a buoy with a mooring ring, a lifting eye, a guide and wear ring as

disclosed in Anderson in the Nielsen devise in order to provide a simple means of attaching the buoy to the piston and securing the unit in place on the sea floor. It also would have been obvious to deliver the water to a reservoir as taught by Anderson in order to provide a mechanism for the pumped water to be used later.

The examiner notes with regards to claim 57 that the recitation of raising sea animals is a future intended use of the pumped water and does not further limit the claimed pump structure.

Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nielsen in view of Anderson as applied to claim 45 above, and further in view of EP 0 875 257 (hereinafter (EP '257).

As set forth above Nielsen in view of Anderson discloses the invention substantially as claimed but does not disclose that the restricting means are plural pins. EP '257 discloses a reciprocating pump having a pin (48) for restricting piston movement. At the time of the invention it would have been obvious to substitute a pin for the restrictor (41) in Nielsen as a simple means of keeping the piston in the cylinder and it also would have been obvious to use plural pins in order to provide the necessary resistance and prevent overload of a single pin.

Claim 52 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nielsen in view of Anderson as applied to claim 45 above, and further in view of Parker (USPN 5,105,094).

As set forth above Neilsen in view of Anderson discloses the invention substantially as claimed but does not disclose a vent hole and valve in the piston. Parker discloses in figures 4, 5 and 12 a reciprocating piston used in submerged waters with a vent hole and valve (86). At the time of the invention it would have been obvious to one of ordinary skill in the art to provide such a vent hole in the piston of Nielsen in order to prevent the inefficient operation of the piston within the cylinder due to air being present.

Response to Arguments

Applicant's arguments with respect to claims 45, 46, 48-52 and 57 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles G. Freay whose telephone number is 571-272-4827. The examiner can normally be reached on Monday through Friday 8:30 A.M. to 5:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Stashick can be reached on 571-272-4561. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3746

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Charles G Freay
Primary Examiner
Art Unit 3746

CGF
July 6, 2007